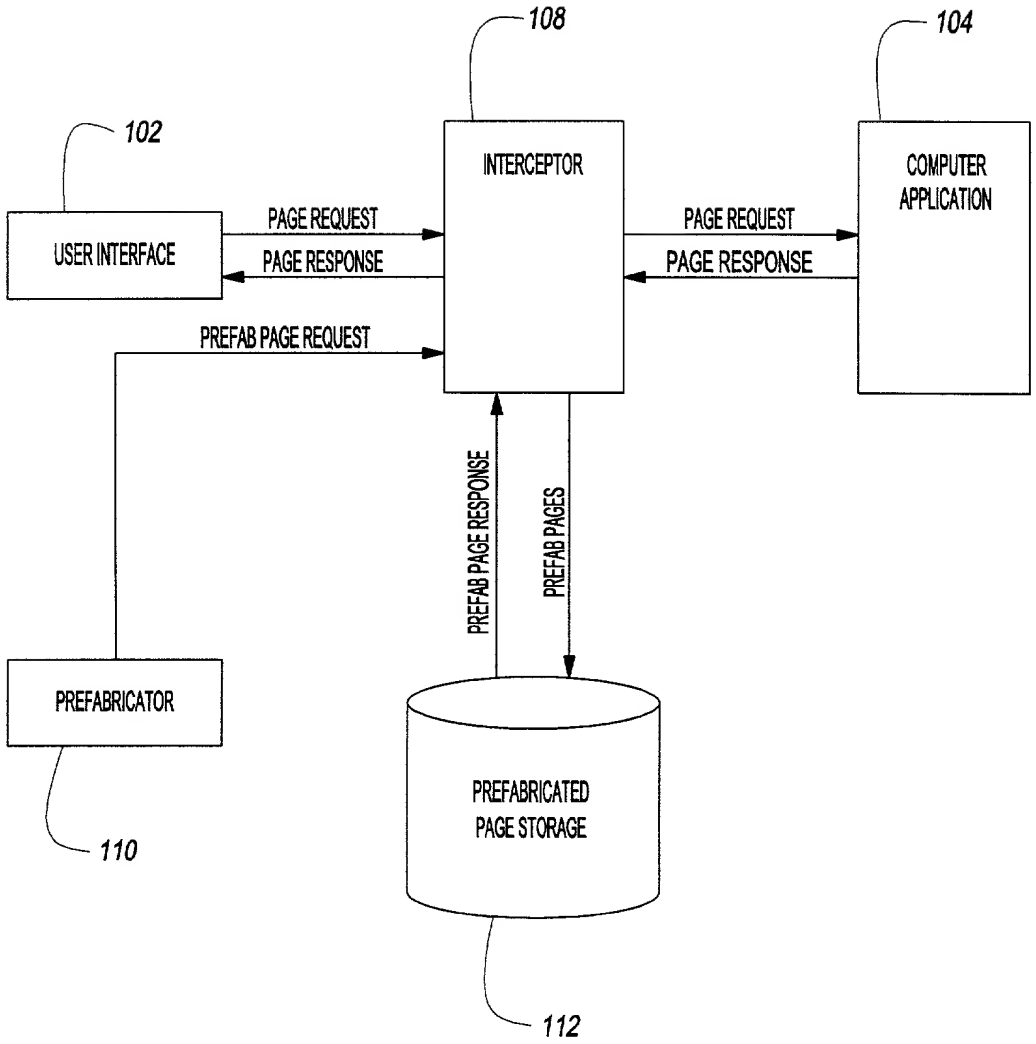

108
104
102
INTERCEPTOR
COMPUTER APPLICATION
USER INTERFACE
PAGE REQUEST
PAGE RESPONSE
PAGE REQUEST
PAGE RESPONSE
PREFAB PAGE REQUEST
PREFAB PAGE RESPONSE
PREFAB PAGES
PREFABRICATOR
PREFABRICATED PAGE STORAGE
110
112

FIG. 1

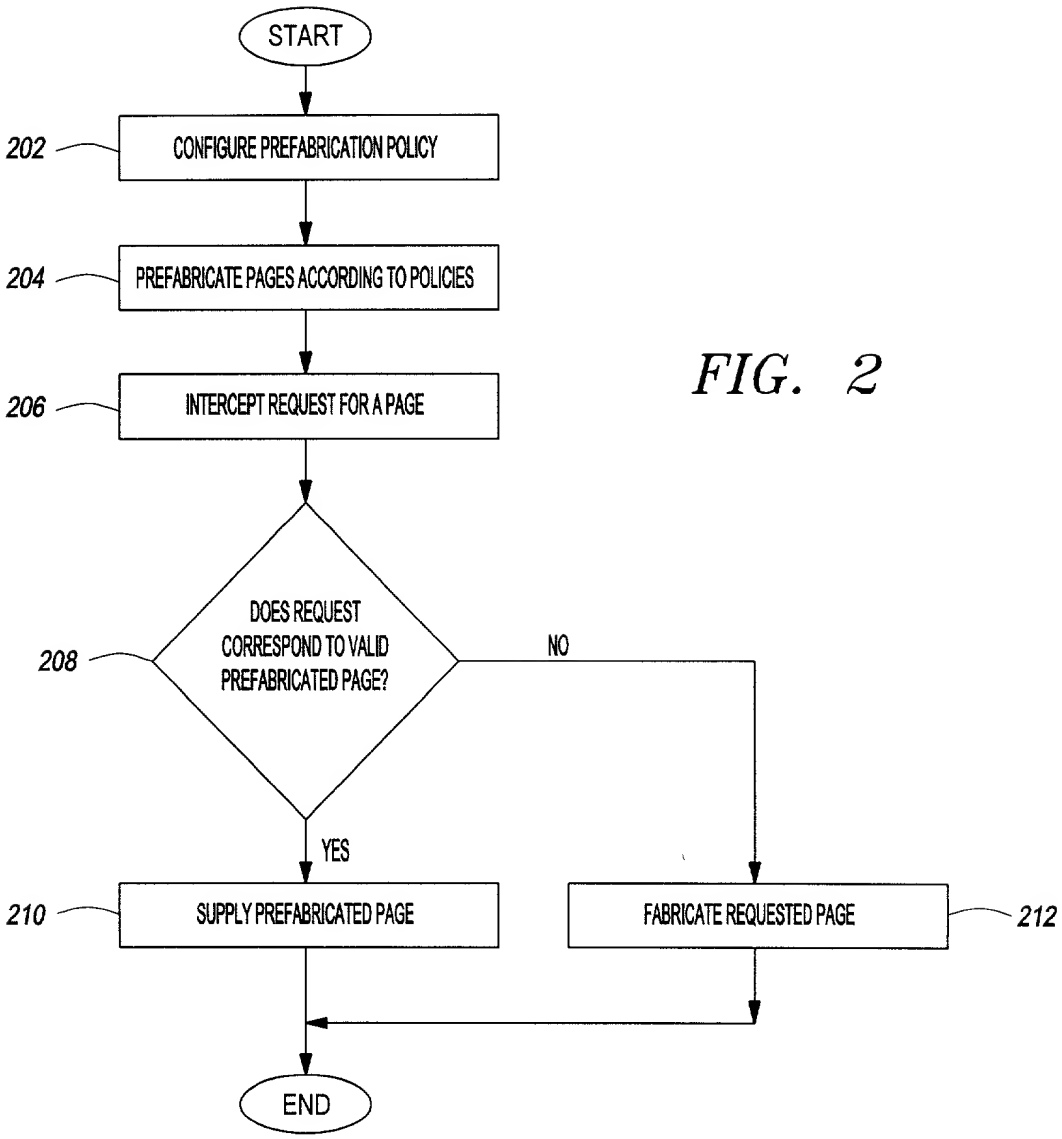

START
202
CONFIGURE PREFABRICATION POLICY
204
PREFABRICATE PAGES ACCORDING TO POLICIES
206
INTERCEPT REQUEST FOR A PAGE
208
DOES REQUEST CORRESPOND TO VALID PREFABRICATED PAGE?
NO
YES
210
SUPPLY PREFABRICATED PAGE
FABRICATE REQUESTED PAGE
212
END

FIG. 2

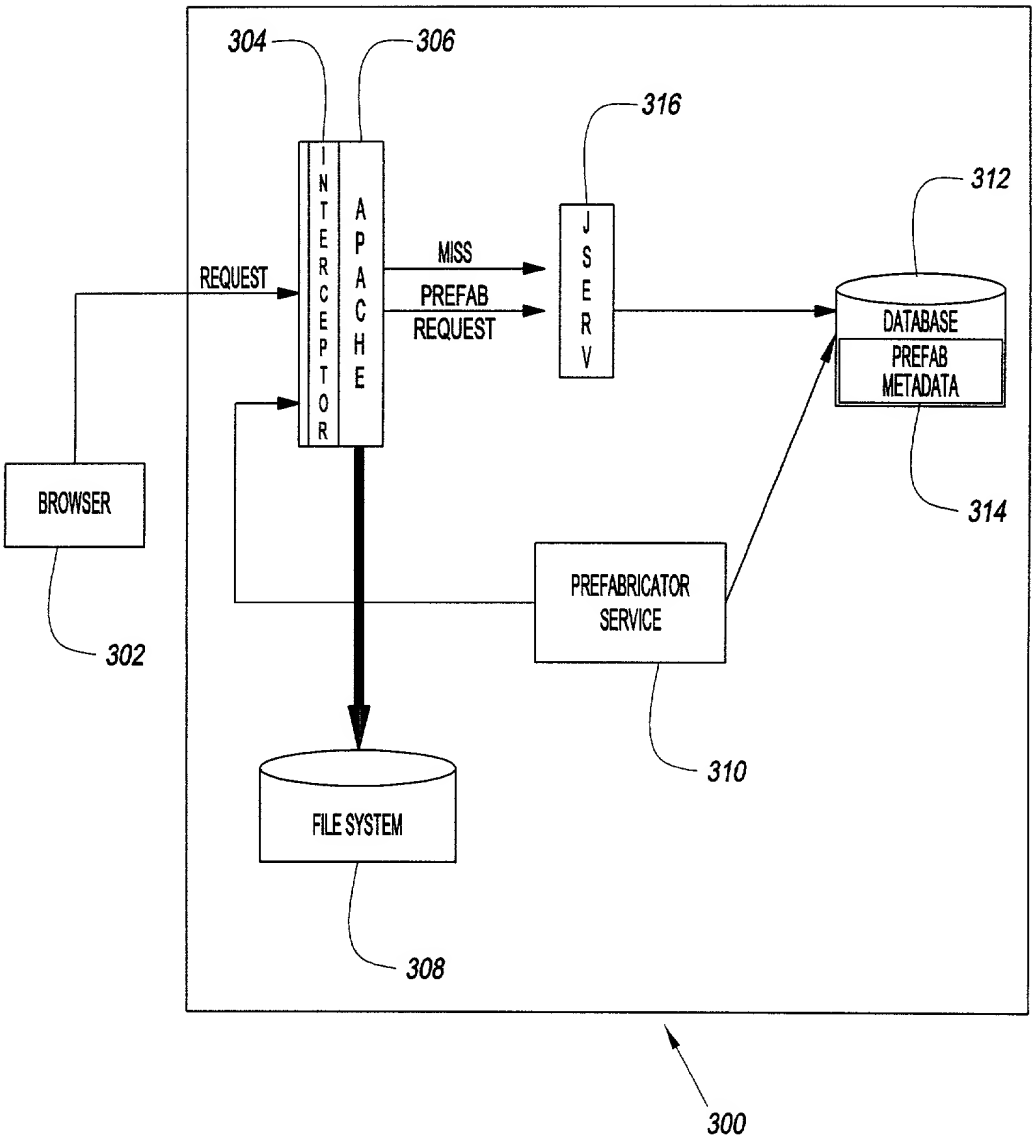

304
306
316
312
INTERCEPTOR
APACHE
JSERV
REQUEST
MISS
PREFAB
REQUEST
DATABASE
PREFAB
METADATA
314
BROWSER
302
PREFABRICATOR
SERVICE
310
FILE SYSTEM
308
300

FIG. 3

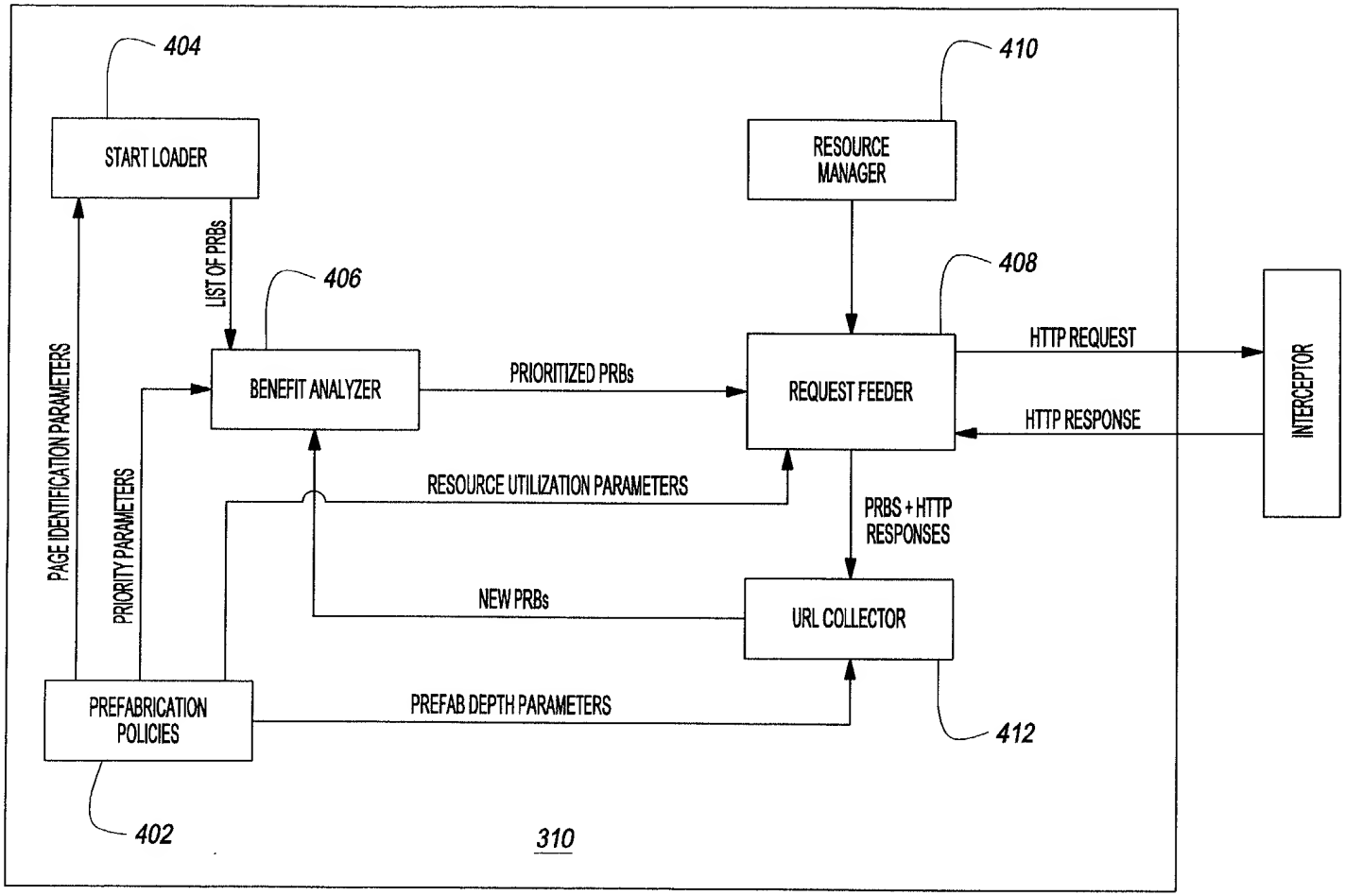

404
START LOADER
410
RESOURCE MANAGER
LIST OF PRBs
406
408
HTTP REQUEST
PAGE IDENTIFICATION PARAMETERS
BENEFIT ANALYZER
PRIORITIZED PRBs
REQUEST FEEDER
HTTP RESPONSE
INTERCEPTOR
PRIORITY PARAMETERS
RESOURCE UTILIZATION PARAMETERS
PRBS + HTTP RESPONSES
NEW PRBs
URL COLLECTOR
PREFABRICATION POLICIES
PREFAB DEPTH PARAMETERS
412
402
310

FIG. 4

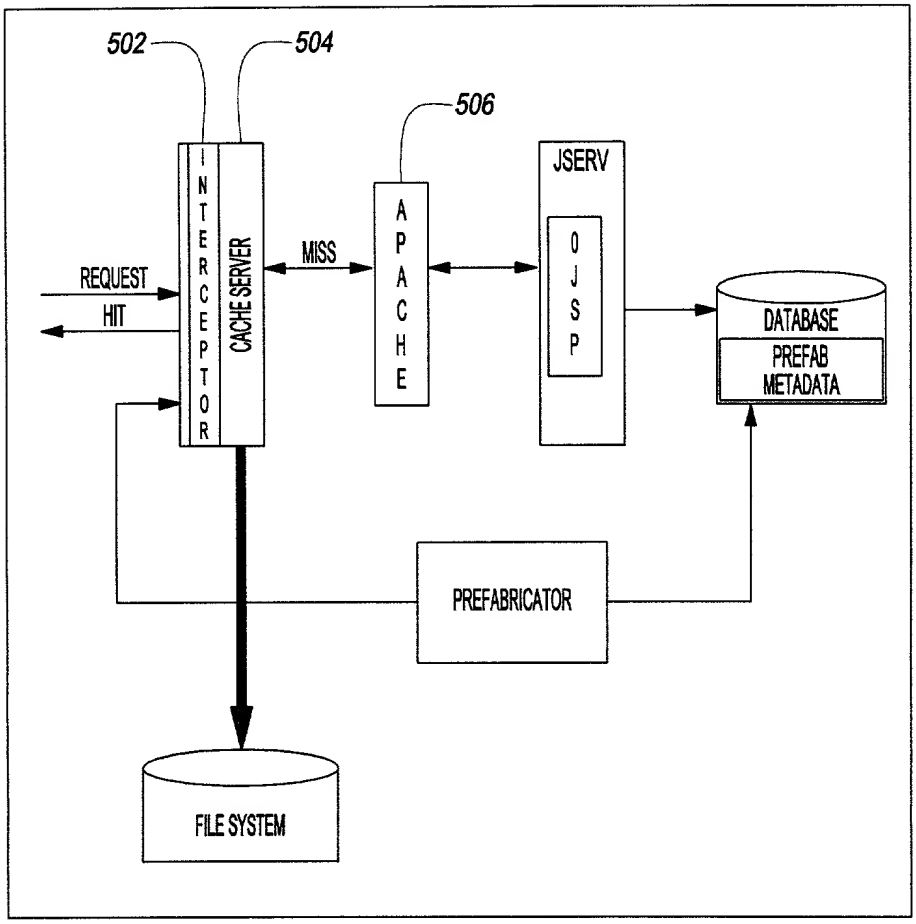

502
504
506
INTERCEPTOR
CACHE SERVER
MISS
APACHE
JSERV
OJSP
REQUEST
HIT
DATABASE
PREFAB METADATA
PREFABRICATOR
FILE SYSTEM

FIG. 5

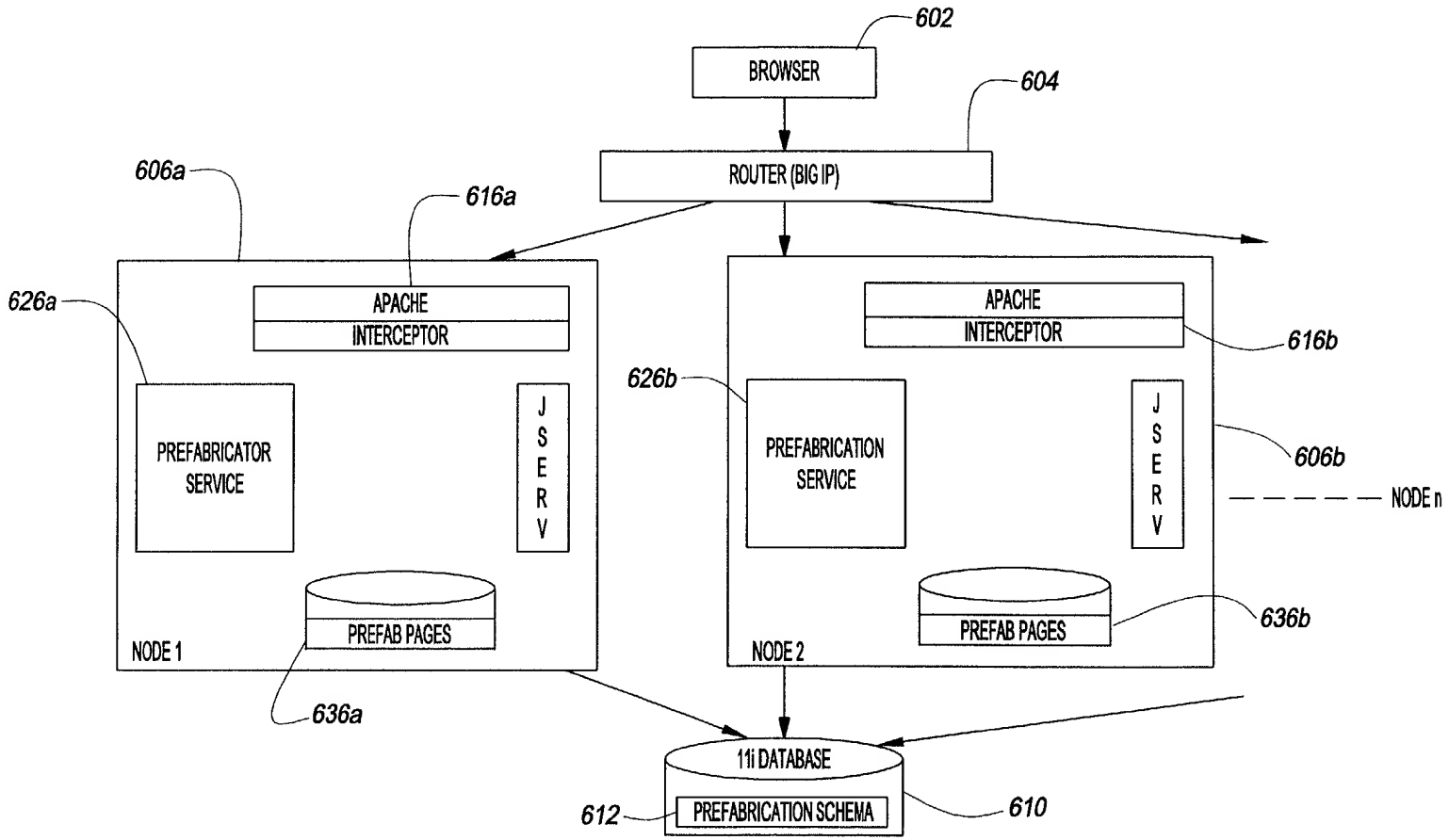

602
BROWSER
604
ROUTER (BIG IP)
606a
616a
626a
APACHE
INTERCEPTOR
PREFABRICATOR SERVICE
J S E R V
PREFAB PAGES
NODE 1
636a
626b
APACHE
INTERCEPTOR
616b
PREFABRICATION SERVICE
J S E R V
606b
NODE n
PREFAB PAGES
636b
NODE 2
11i DATABASE
612
PREFABRICATION SCHEMA
610

FIG. 6

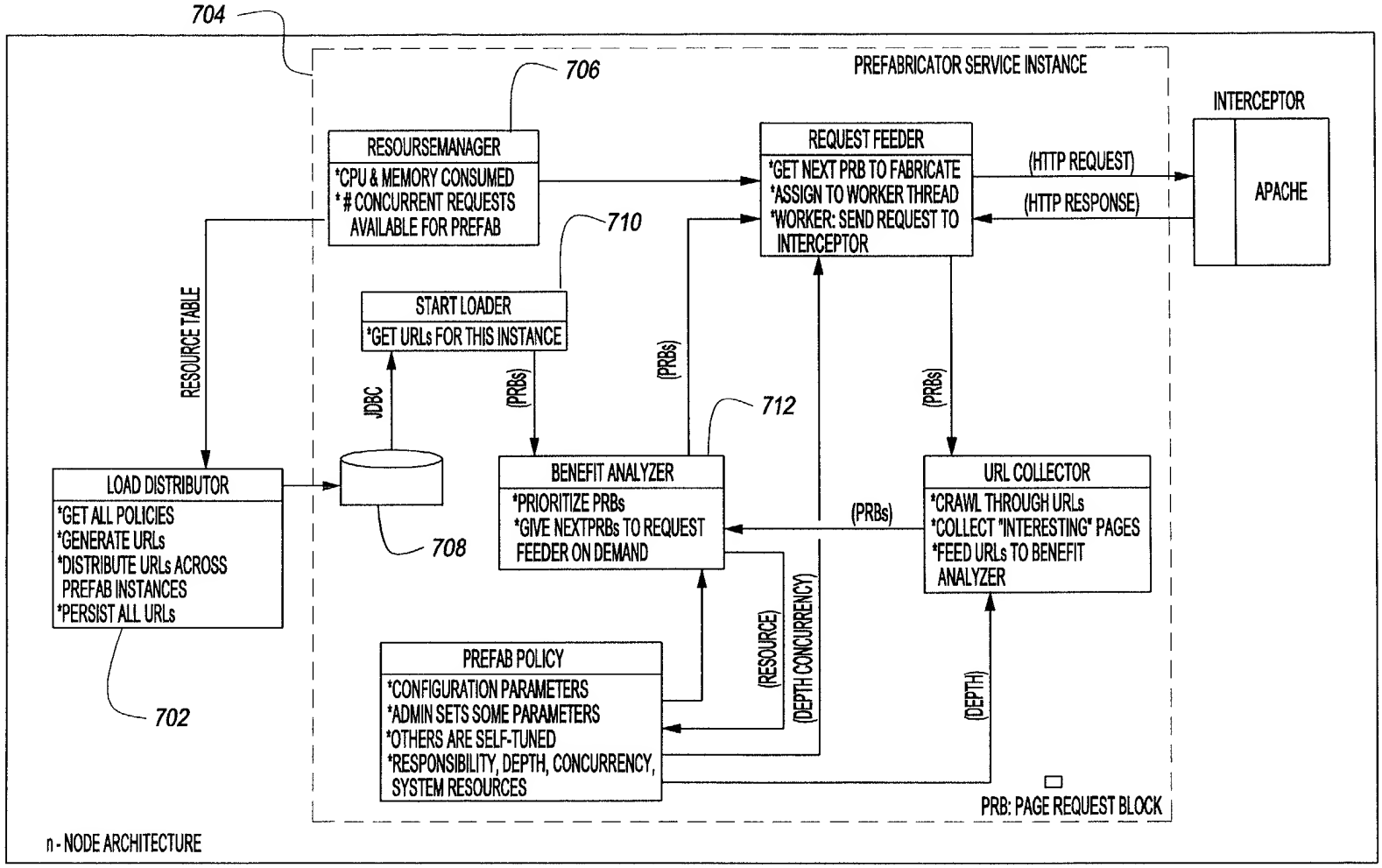
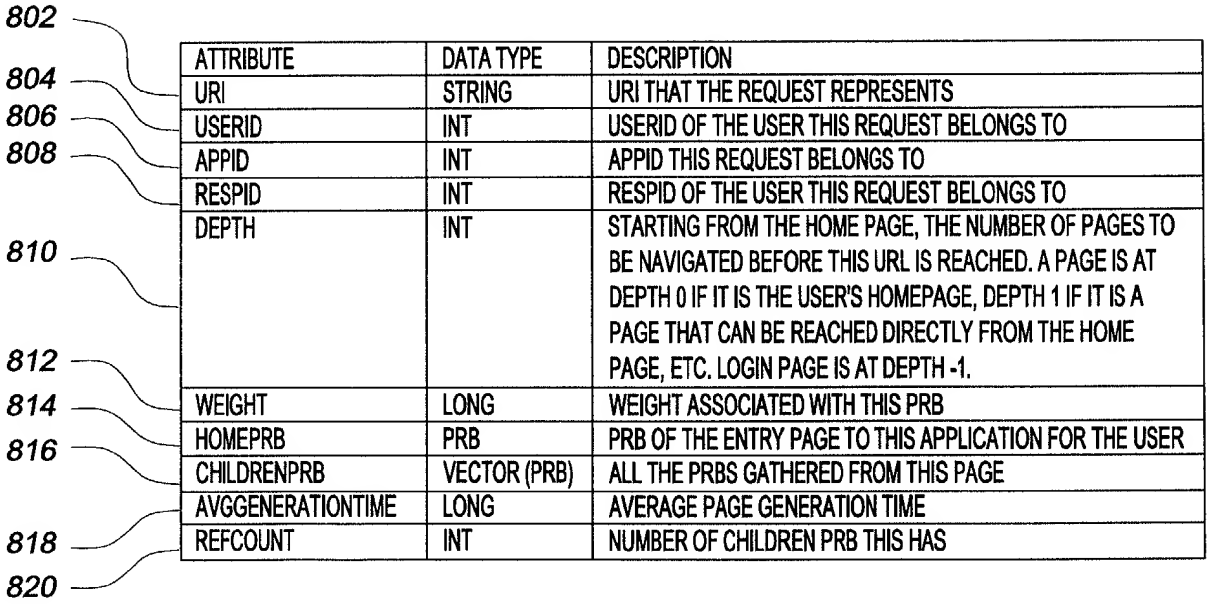

704
706
PREFABRICATOR SERVICE INSTANCE
INTERCEPTOR
RESOURSEMANAGER
*CPU & MEMORY CONSUMED
* # CONCURRENT REQUESTS AVAILABLE FOR PREFAB
REQUEST FEEDER
*GET NEXT PRB TO FABRICATE
*ASSIGN TO WORKER THREAD
*WORKER: SEND REQUEST TO INTERCEPTOR
(HTTP REQUEST)
(HTTP RESPONSE)
APACHE
710
START LOADER
*GET URLs FOR THIS INSTANCE
RESOURCE TABLE
JDBC
(PRBs)
(PRBs)
(PRBs)
712
LOAD DISTRIBUTOR
*GET ALL POLICIES
*GENERATE URLs
*DISTRIBUTE URLs ACROSS PREFAB INSTANCES
*PERSIST ALL URLs
708
BENEFIT ANALYZER
*PRIORITIZE PRBs
*GIVE NEXTPRBs TO REQUEST FEEDER ON DEMAND
(PRBs)
URL COLLECTOR
*CRAWL THROUGH URLs
*COLLECT "INTERESTING" PAGES
*FEED URLs TO BENEFIT ANALYZER
PREFAB POLICY
*CONFIGURATION PARAMETERS
*ADMIN SETS SOME PARAMETERS
*OTHERS ARE SELF-TUNED
*RESPONSIBILITY, DEPTH, CONCURRENCY, SYSTEM RESOURCES
(RESOURCE)
(DEPTH CONCURRENCY)
(DEPTH)
PRB: PAGE REQUEST BLOCK
702
n - NODE ARCHITECTURE

FIG. 7



ATTRIBUTE	DATA TYPE	DESCRIPTION
URI	STRING	URI THAT THE REQUEST REPRESENTS
USERID	INT	USERID OF THE USER THIS REQUEST BELONGS TO
APPID	INT	APPID THIS REQUEST BELONGS TO
RESPID	INT	RESPID OF THE USER THIS REQUEST BELONGS TO
DEPTH	INT	STARTING FROM THE HOME PAGE, THE NUMBER OF PAGES TO BE NAVIGATED BEFORE THIS URL IS REACHED. A PAGE IS AT DEPTH 0 IF IT IS THE USER'S HOMEPAGE, DEPTH 1 IF IT IS A PAGE THAT CAN BE REACHED DIRECTLY FROM THE HOME PAGE, ETC. LOGIN PAGE IS AT DEPTH -1.
WEIGHT	LONG	WEIGHT ASSOCIATED WITH THIS PRB
HOMEPRB	PRB	PRB OF THE ENTRY PAGE TO THIS APPLICATION FOR THE USER
CHILDRENPRB	VECTOR (PRB)	ALL THE PRBS GATHERED FROM THIS PAGE
AVGGENERATIONTIME	LONG	AVERAGE PAGE GENERATION TIME
REFCOUNT	INT	NUMBER OF CHILDREN PRB THIS HAS

FIG. 8

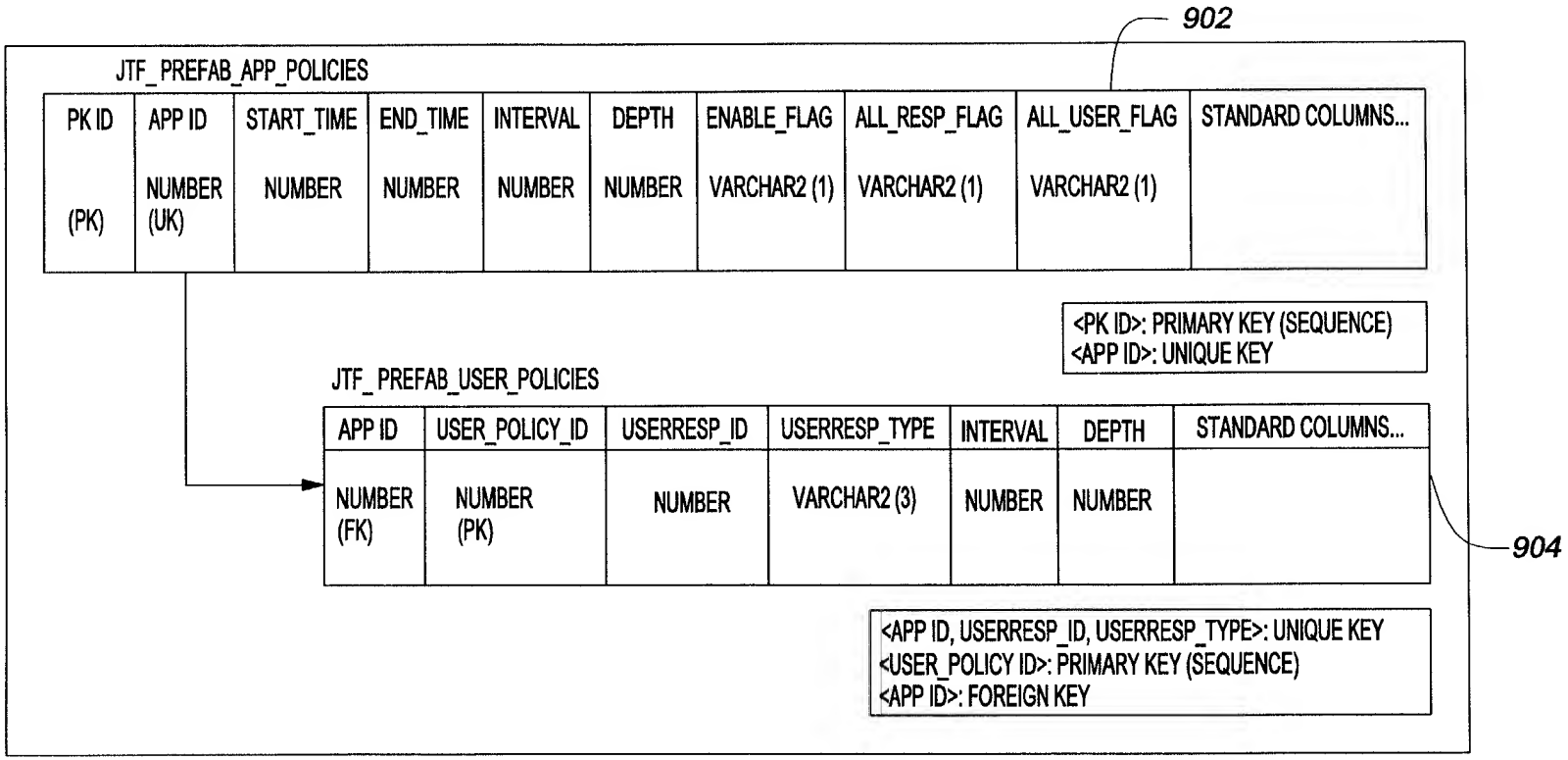

902
JTF_PREFAB_APP_POLICIES
PK ID
(PK)
APP ID
NUMBER
(UK)
START_TIME
NUMBER
END_TIME
NUMBER
INTERVAL
NUMBER
DEPTH
NUMBER
ENABLE_FLAG
VARCHAR2 (1)
ALL_RESP_FLAG
VARCHAR2 (1)
ALL_USER_FLAG
VARCHAR2 (1)
STANDARD COLUMNS...
<PK ID>: PRIMARY KEY (SEQUENCE)
<APP ID>: UNIQUE KEY
JTF_PREFAB_USER_POLICIES
APP ID
NUMBER
(FK)
USER_POLICY_ID
NUMBER
(PK)
USERRESP_ID
NUMBER
USERRESP_TYPE
VARCHAR2 (3)
INTERVAL
NUMBER
DEPTH
NUMBER
STANDARD COLUMNS...
904
<APP ID, USERRESP_ID, USERRESP_TYPE>: UNIQUE KEY
<USER_POLICY ID>: PRIMARY KEY (SEQUENCE)
<APP ID>: FOREIGN KEY

FIG. 9

INDEX TABLE	DESCRIPTION
WEIGHT INDEX	INDEXES PRBS ACCORDING TO THEIR WEIGHTS
DEPTH INDEX	INDEXES PRBS ACCORDING TO THEIR DEPTHS
URI SUBSTRING INDEX	INDEXES PRBS ACCORDING TO THEIR URI SUBSTRINGS. NOW, THE URI SUBSTRING IS DEFINED AS THE .JSP NAME OF THE PRB (E.G. JTFAVALD.JSP).
ID INDEX	INDEXES PRBS ACCORDING TO THEIR APPID, RESPID, USERID COMBINATION.
URI INDEX	INDEXES PRBS ACCORDING TO THEIR URI. SINCE THIS ATTRIBUTE IS ALWAYS UNIQUE, THE DATA STRUCTURE OF THIS INDEX IS A SIMPLE HASHTABLE OF PRBS, INSTEAD OF A HASHTABLE OF VECTORS.

FIG. 10

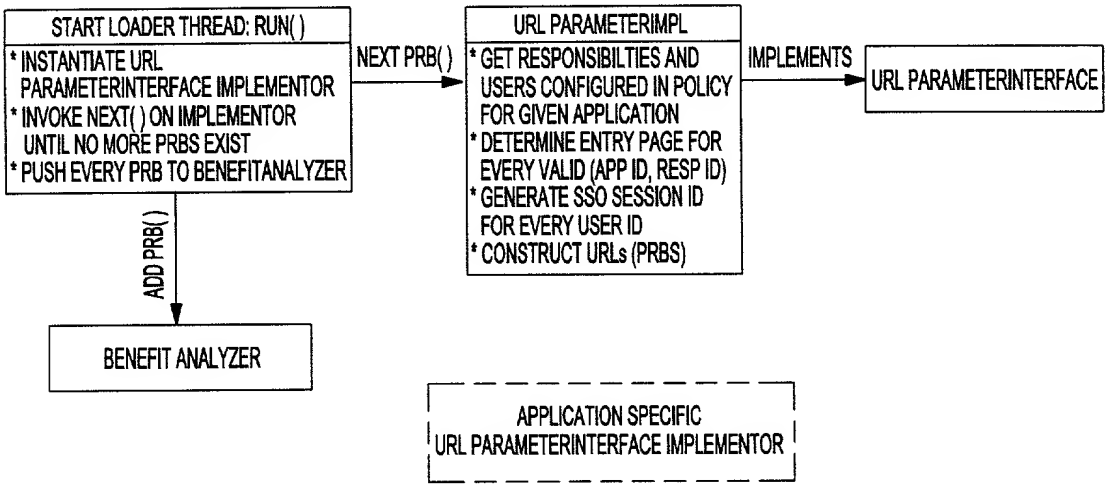


FIG. 11

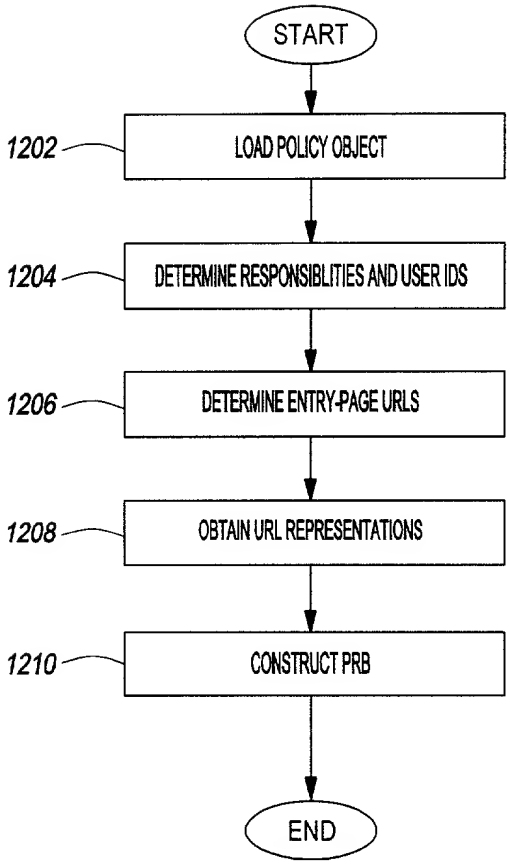

START
1202
LOAD POLICY OBJECT
1204
DETERMINE RESPONSIBLITIES AND USER IDS
1206
DETERMINE ENTRY-PAGE URLS
1208
OBTAIN URL REPRESENTATIONS
1210
CONSTRUCT PRB
END

FIG. 12

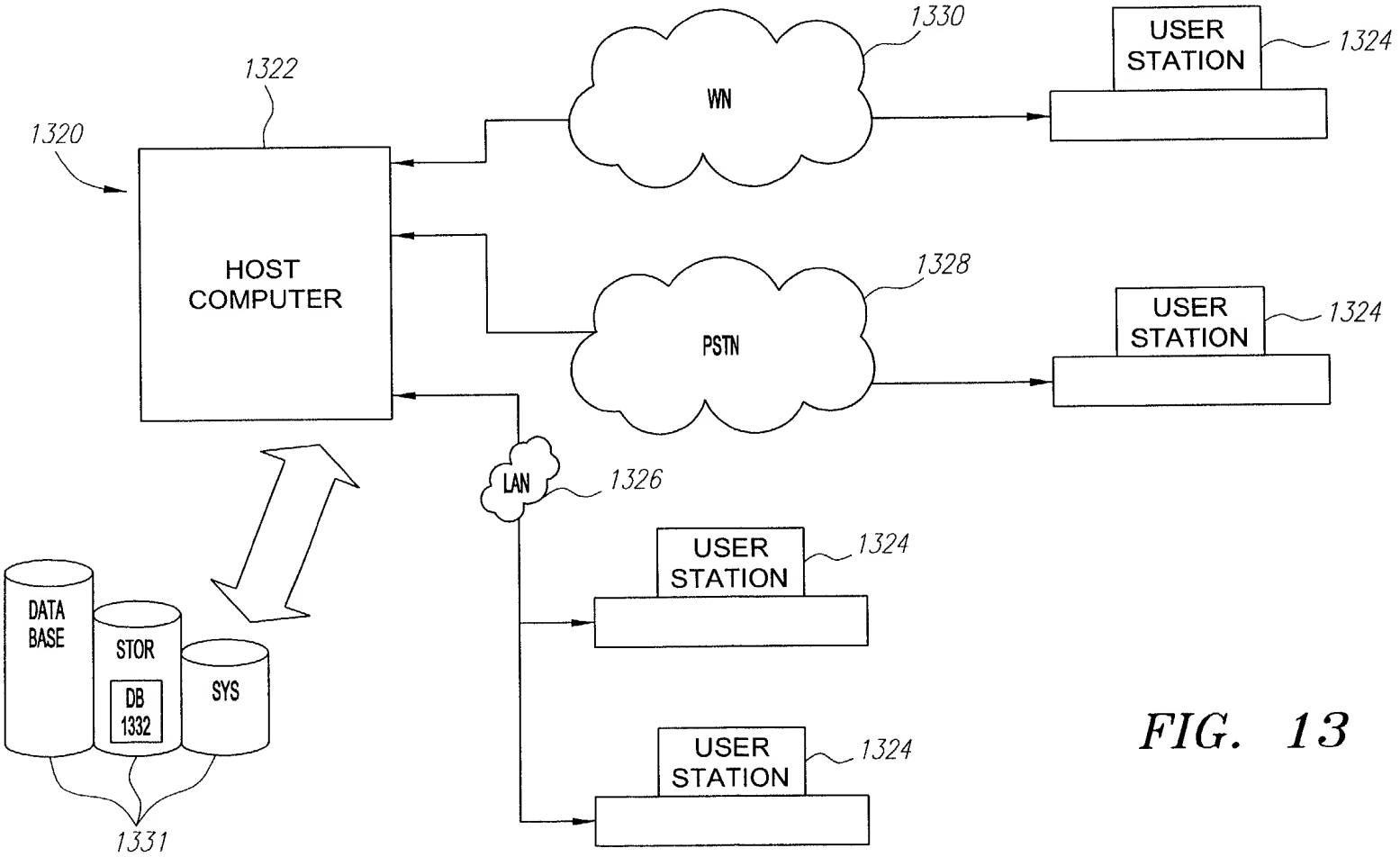

1320
1322
HOST COMPUTER
1330
WN
USER STATION
1324
1328
PSTN
USER STATION
1324
LAN
1326
USER STATION
1324
USER STATION
1324
DATA BASE
STOR
DB 1332
SYS
1331

FIG. 13

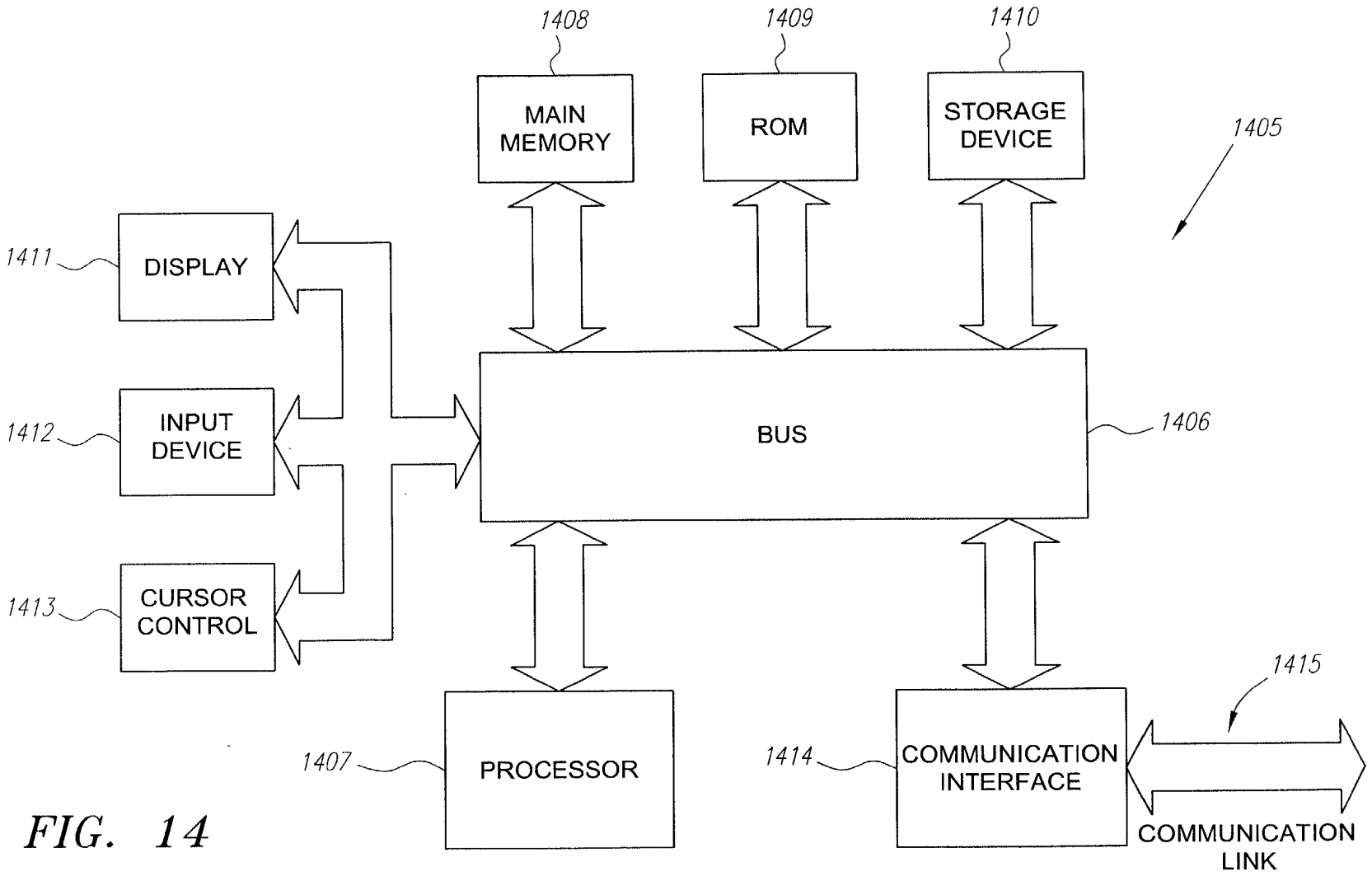

1408
1409
1410
MAIN MEMORY
ROM
STORAGE DEVICE
1405
1411
DISPLAY
1412
INPUT DEVICE
1413
CURSOR CONTROL
BUS
1406
1407
PROCESSOR
1414
COMMUNICATION INTERFACE
1415
COMMUNICATION LINK

FIG. 14